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ABSTRACT

A project was conducted at Sumner High School in Sumner, Washington, to establish districtwide policies and procedures for granting equivalent credit for English, mathematics, science, and social studies skills taught in vocational education courses. Using as a guide the Washington Commission on Vocational Education's 1986 booklet entitled "Options for Equivalent Credit in the High School Curriculum," project staff completed a review of all vocational classes currently offered at the high school to determine if they could meet the requirements proposed in the booklet. A list of classes that appeared to meet the equivalent credit requirements was compiled and sent to the school's existing curriculum committee. The committee then set up meetings with the recommending departments and the departments requested to grant equivalent credit. Each proposal was discussed in detail at the meetings. The final steps of the approval process were forwarding those proposals that had been recommended for approval to the high school principal and documenting the approvals and disapprovals with the rationale behind them. (Appendixes include an outline of the equivalent credit procedures developed, cross-credit proposals for vocational classes, a completed request for equivalent credit course approval, and individual academic responses to equivalent credit proposals.) (MN)

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FINAL REPORT

Project No. #87-CXH(057)ER

To Establish Credit for Vocational Classes in English Mathematics, Science, and Social Studies at Sumner High School

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Curriculum Development Project
Conducted Under
Public Law 94-482

Loren C Lawrence, Project Director
Loren C Lawrence, Principal Investigator
Sumner High School
1707 Main Street
Sumner, Washington 98390

February 29, 1988

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TITLE PAGE

Final Report

Project No. #87-CHX(057)ER

To Establish
Credit for Vocational Classes in English,
Mathematics, Science, and Social Studies
at Sumner High School

Curriculum Development Project
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The project reported herein was performed pursuant to a grant from the Planning, Research and Equity Division of the Washington State Board for Vocational Education. All materials developed through this contract comply with non-discrimination and sex equity policies. Contractors undertaking projects under State Board for Vocational Education sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Board position or policy.

Loren C Lawrence, Project Director
Loren C Lawrence, Principal Investigator
Sumner High School
1707 Main Street
Sumner, Washington, 98390

February 29, 1988

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I. SUMMARY OF REPORT

At the present time some vocational subjects are utilized as equivalent credit to meet graduation requirements on an "as required" basis. The goal of this project was to establish policies and procedures within our district to grant equivalent credit, then evaluate each vocational class to determine if it meets equivalent credit guidlines, then recommend those that meet guidlines to the local school board for adoption.

The methodology we utilized was to establish district guidlines and set up a standard procedure to be used to propose, evaluate, and recommend classes for equivalent credit. We used the April 1986 CVE booklet "Options for Equivalent Credit in the High School Curriculum" as a guidline to establish our districts policies and procedures. The second step of the process included a complete review of all vocational classes presently being offered to determine if they could meet an equivalent credit requirement. During this initial review we used existing essential learning elements and course syllabus to determine if they appeared to meet equivalent credit requirements. Those classes that appeared to meet an equivalent credit requirement were proposed for equivalent credit. This action prompted the completion of a request for equivalent credit course approval.

This request then went to the existing curriculum committee. This committee then set up meetings with the recommending department and the department requested to grant equivalent credit. Each proposal was discussed in detail at the meeting. At the conclusion of this process the granting department responded back to the curriculum committee. The proposal was either approved, returned for additional information, or rejected with justification for rejection. Where additional information was required it was provided then meetings were set up to discuss the proposal, or a final recommendation was made on the proposal.

The final step of the process is for the curriculum committee to make its recommendations to the High School Principal. Classes approved for equivalent credit will then be included, and state this, in the course description booklet.

Benefits of this project to our school district will be a defined process for requesting, evaluating, and recommending cross credit. The projects potential contribution to vocational education is an actual procedure that was field tested.

II. REPORT

1. Problem toward which project was directed

At the outset of the project equivalent credit was granted for Agriculture and Horticulture as a Science credit on an "as needed for graduation" basis. Social Studies equivalent credit was granted on an "as needed for graduation" basis for students taking Business Law and Economics who were in a vocational sequence that required the classes to complete a certificate requirement. Electronic Business Mathematics also meets a math requirement on an "as needed for graduation" basis. The problem is that there are no clear cut guidlines established to grant equivalent credit for elective classes. This grant was implemented to establish policies and procedures to propose, evaluate, and recommend equivalent credit.

As graduation requirements increase elective classes and programs become increasingly competitive. Many of the elective classes, especially in the vocational area, are very heavily orientated to Mathematics, Science, and English. It is becoming more important to emphasize and relate your classes to realistic situations. Since most vocational classes relate realistically to the world of work it is a natural to grant equivalent credit for graduation. Technology is by its very nature heavily weighted towards Mathematics and Scientific concepts. There is considerable work being done within the State on the equivalent credit concept. One of the most significant pieces of current literature is the pamphlet published by the Commission for Vocational Education in April 1986. The title of this publication is "Options for Equivalent Credit in the High School Curriculum, A guide for Local Decision Making". We also reviewed material gathered from other districts that grant equivalent credit for vocational classes. With the available material, and our review of our offerings, we identified vocational classes that appeared to be candidates for equivalent credit. The grant provided us with the opportunity to continue the equivalent credit process.

2. Objectives of the project

The main goal is to establish District policies and procedures for proposing, evaluating, recommending, and approving equivalent credit for vocational classes. The final product is written guidlines to implement the above goal along with an approved equivalent credit proposal for the district.

Objectives:

A. To write an equivalent procedure for the Sumner School District.

B. To evaluate existing vocational classes to determine if they meet equivalent credit guidlines.

C. To compare equivalent credit classes with the academic requirement using course syllabus and essential learning elements.

D. To prompt dialogue between recommending equivalent credit teacher and department granting credit.

E. To recommend courses meeting equivalent credit guidlines to building principal for action.

F. To monitor progress of recommendations to insure they are implemented.

G. To formalize equivalent credit procedures within the district.

3. Description of project

After the project was approved the first task was to develop the equivalent credit procedure. I have attached a copy of our process along with the application that we use. These are attached as appendix A. The procedure defines equivalent credit, the purpose of equivalent credit, the history within our district, guidlines for requesting equivalent credit, and deadlines established within our district. The initial draft procedure then went to the curriculum committee who made changes which were incorporated within the revised draft which is attached.

After the curriculum committee approved the equivalent credit procedure vocational teachers were then asked to complete the equivalent credit forms and return them to the curriculum committee, who in turn forwarded the proposals to the granting department chairman for review and preparation for discussion. After the above process was completed the curriculum committee set up meetings to allow direct dialogue between the proposer and the granting department. During these meetings the proposals were discussed in detail. These meetings included the proposer, his/her department chair, the granting department chair, any additional personnel requested by the department chair, and the curriculum committee members. We used grant monies to provide the substitutes necessary to accomplish this task. I have attached as appendix B a copy of the initial cross credit proposal for vocational classes. Classes that we initially included for equivalent credit included Agriculture I, Auto Services, Accounting I, Business Communications, Business Law, Business Machines, Business Mathematics, Economics, Recordkeeping, and Horticulture I.

I have attached as appendix C a completed request for equivalent credit course approval along with its supporting attachments. A request was submitted for each class recommended for equivalent credit. As a sidelight of this process we found it very interesting to listen to the dialogue between the proposers and the granting academic departments. In some cases this was the first dialogue that had been conducted and was extremely favorable.

After the initial meetings to allow the proposer and granting department to meet to discuss the proposal time was then provided to allow the granting department to study the proposal in depth. After an in-depth study the granting department then formally recommended approval of the equivalent credit, recommended that equivalent credit not be granted, or requested additional information or meetings for further study. These recommendations or requests for additional input went back to the curriculum committee. If further information was requested then the proposer was asked to provide it. If further meetings were required they were set up using grant monies to provide substitutes. The most satisfactory way to obtain the additional information requested was with formal meetings between the proposer and the granting department. Attached as appendices D thru G are responses from the granting departments in reference to the equivalent credit proposals.

Appendix D is the English response to grant equivalent credit for Business Communications. The English Department did not recommend approval based on the way their existing English program is structured but will consider the proposal when they review their existing program. Appendix E is the Science Department response for equivalent credit for Automotive Services, Horticulture I, and Agriculture I. They endorsed the granting of equivalent credit for Horticulture I. They grandfathered equivalent credit for Agriculture I with the stipulation that it be reviewed during the next year. That review process has already been started. They did not endorse equivalent credit for Automotive Services. Appendix F is the Social Studies response to equivalent credit for Business Law and Economics. Appendix G is the Mathematics response to the equivalent credit request from the Business Department.

4. Results and Accomplishments of the Project

The most obvious results of the project were clearly defined policies and procedures for requesting, evaluating, and granting equivalent credit at Sumner High School. A second result of the project was implementation of dialogue between the Vocational Teachers and the Academic Orientated teachers. This dialogue proved to be very positive in nature and hopefully continuing. The project also focused on the concept that many of the Vocational classes do in fact focus very heavily on the academic areas of English, Social Studies, Science, and Mathematics. Hopefully it will promote an awareness in the Academic arena to focus more on relevant instruction rather than rote instruction. There is a keener awareness now of the concerns of elective program instructors in relation to making classes meaningful for the students. Time and effort that went into this project will reap benefits for years to come for both the vocational teachers and the academic departments.

5. Evaluation of Project

Project personnel were very positive about the project. They commented about having time to meet with the granting department and being able to discuss face to face with their peers. It was an enlightening experience both for the proposing instructor and the granting department. School administrators were involved with the project from the beginning and felt the project was worthwhile and enlightening. It was a neat opportunity to bring the proposers and the granting departments together to discuss the proposals. Without the grant we would not have been able to do this. Students will benifit from the project on the basis that there are clear guidlines as to what can be taken to meet academic graduation requirements. These guidlines will be incorporated in the new course description booklets provided to students prior to new registration periods. Peer comments were positive because the work provided clear guidlines to propose, evaluate, and grant equivalent credit. The Vocational General Advisory committee is being kept current of the project and are very supportive of the project and the potential results.

6. Conclusions, Implications, and Recommendations

There is movement nationwide to grant equivalent credit for elective classes. This trent must continue along with the trend of making instruction more relevant to the real world and the environment our clients (students) will enter. We must come to grips that less than half of our students will continue their education beyond grade 12. We must also come to grips with the drop out problem of approximately 25 percent from grades 9 thru 12. I believe that the equivalent credit process is a step in that direction. We must break the thought train that more is better when we discuss graduation requirements. More English, Mathematics, or Science is not the answer. It must meet the needs of those non college bound students and be relevant to the careers this group will enter.

7. Project Dissemination

The results will be incorporated within our course description booklet, but further dissemination is not projected at this point. Since we have established the process within our district we will continue to recommend classes for equivalent credit as the need arises. No workshops, seminars, or articles are proposed at this point.

APPENDIX A

EQUIVALENT CREDIT PROCEDURE
SUMNER HIGH SCHOOL

Definition: An equivalent credit (cross credit) is the granting of full or partial graduation credit for a specific subject area to an elective area course. For example, granting a graduation credit for a lab science requirement to Agriculture I.

Purpose: With increased high school graduation requirements, the equivalent credit expands a student's choice of required and elective classes.

History: In 1985 many of the teachers in elective subject areas expressed concern about increased graduation requirements. The concern prompted discussion about equivalent credit (also called cross credit). During the summer of 1986 a group of vocational teachers met to formulate a cross credit proposal to submit to the High School Curriculum Committee. The high school curriculum committee has representatives from each of the high school academic and vocational departments. The committee developed the procedures outlines for an equivalent credit process.

Equivalent Credit Guidlines: The following are the guidlines to follow to request and grant equivalent credit:

A. All departments offering elective courses for which equivalent credit is being proposed must meet with the impacted department for input on the application form. An example is if the Agriculture Instructor wished to grant equivalent credit for Agriculture I, he/she would have to meet with the granting department, in this case Science.

B. The equivalent application form may be obtained from your Department Chair, or your curriculum committee representative. The proposing instructor will fill out the application and forward it to his/her department chair along with supporting material.

C. The department chair will review the application along with members of that department, then make a written recommendation to the curriculum committee chair.

D. The curriculum committee chair will provide copies of the application to the granting department and set up a time for the proposer to meet with the granting department. After this meeting the granting department will make a recommendation back to the curriculum committee chair.

E. Based on the input received, the curriculum committee will recommend a course of action to the High School Principal, who will take the final action. The application is then returned to the curriculum committee for action or return.

F. The High School Principal will inform the District Curriculum Director of the results for presentation to the CIC and School Board.

G. Approvals and disapprovals must be documented with the rationale for the decision. Proposals that do not meet equivalent credit guidlines, but could with additional work, should be recommended for approval with the stipulation attached to the recommendation.

Deadlines: November 15 is the deadline for submitting the completed application to the curriculum committee.

December 31 is the deadline for the curriculum committee to make a recommendation to the High School Principal.

January 31 is the deadline for the High School Principal to act on the proposal.

Reassessment: The curriculum committee and the impacted departments will evaluate the equivalent course's curriculum at the end of the first year, then if necessary, recommend course changes and establish the date for the next review.

Student Access to Courses: The committee recommends that the student sign up for equivalent credit classes during general registration times. The course description booklet will list classes that have been approved for equivalent credit.

Recordkeeping: Student's transcript will indicate the course title student enrolled in along with a notation indicating equivalent credit meeting graduation requirements. Example Agriculture i* meets a lab science equivalent credit.

Equivalent Credit Application: See attached form.

lcl

SUMNER HIGH SCHOOL
Request for Equivalent Credit Course

Submitted By: _____ Department: _____

Present Course Title: _____

Grade Level: _____

Proposed Equivalent Credit Department: _____

Equivalent Number of Credit(s) Recommended: _____

Grade Level Proposed For: _____

Brief description of course content: (Attach current syllabus)

Course objectives related to equivalent credit department:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Texts and supplementary materials used: (list)

Additional material or justification: (attach if necessary)

_____
Department Recommendation Granting Department Recommendation

_____
Curriculum Committee Recommendation Principal Approval Date

APPENDIX B

DATE: August 13, 1986

TO: Curriculum Committee, Sumner High School

FROM: Technical Sciences/Business Department
Cross Credit Proposal Committee

SUBJECT: Cross Credit Proposals for Vocational Classes

The following classes are being proposed as having corresponding content to be considered as cross credited with mathematics, social studies, English, or science courses. The criteria used were the essential learnings and course objectives, as reviewed by the committee:

Agriculture I	Economics
Agriculture II	Recordkeeping
Auto Services	Cosmotology
Accounting I	Drafting II
Accounting II	Drafting III
Business Communications	Pregraphics
Business Law	Graphic Communications
Business Machines	Horticulture I
Business Mathematics	Horticulture II

The underlined courses already have approval for cross credit but some will need changes in the course description.

Enclosed are the proposals with the rationale and suggested credit recommended.

Course	Presently Cross Credited	Cross Credit Recommendation	Suggested Credit
Agriculture I (1 yr. course)	X	Science	1
Agriculture II (1 yr. course)	X	Science	1
Automotive Services (2-hour block) 1 yr. course		Science	1

Rationale: Practical Science: Uses scientific methods: hypothesis, deduction, etc.

Essential Learnings when compared to Science 5 areas - 4 (a) 1 (e) anatomy

Chemistry syllabus 8 out of 11 objectives met (1, 2, 3, 4, 5, 6, 8, 9)

Physics syllabus 4 out of 6 objectives met (1, 4, 5, 6)

Accounting I (1 yr. course)	X	Math	1
Accounting II (1 yr. course)	X	Math	1
Business Communications (semester)		English	1/2

Rationale: Essential learnings and course objectives match

Business Law (semester)	X	Social Studies (senior yr. elective)	1/2

Recommendation: Drop proficiency certificate requirement

Business Math (semester)	X	Math	1/2
Economics (semester)	X	Social Studies (senior yr. elective)	1/2

Recommendation: Drop proficiency certificate requirement

Recordkeeping (1 yr. course)	X	Math	1

Cosmotology (3-hour block) 1 yr. course		Science	1

Rationale: Essential learnings match 5 areas 3A and 2B 300 hours of theory required - anatomy, physiology, biology, chemistry

Drafting II (1 yr. course)		Math	1/2

Rationale: Essential learnings 4A's, D.O.T. recommends 240 hours math related instruction in program.

Drafting III (2-hour block) 1 yr. course		Math	1/2

Rationale: Essential learnings 4A's

PreGraphics (1 yr. course)		Math	1/2

Rationale: Syllabus 5 out of 8, Essential learnings B B C A

Graphic Communications (2-hour block) 1 yr. course		Math	1/2

Rationale: By completing 3 hour block (both classes) one could get credit math

Horticulture I (1 yr. course)	X	Science	1
Horticulture II (1 yr. course)	X	Science	1

APPENDIX C

Rev. 6D Draft

SUMNER HIGH SCHOOL
Request for Equivalent Credit Course Approval

Submitted By: *Loren C. Lawrence* **Department:** *Business Department*

Present Course Title: *Business Law*

Grade Level: *11 and 12th Graders*

Proposed Equivalent Credit Department *Social Studies*

Equivalent number of credit(s) recommended: *.5 credits 90 hour class*

Grade Level Proposed For: *11 and 12th Graders*

A. Brief description of course content:(Attach current syllabus)

Business Law is a one semester class that emphasises the application of legal principles and practices to personal management and financial problems. The class deals with the judicial system as it relates to civil, criminal, juvenile, and contract law. The student is provided a comprehensive view of law as it relates to everyday living, then concentrates very heavily to contract law. It discusses contracts from the point of being legal, enforceable, and valid. It discussed the essential elements of a contract. It also deals with our Federal and State court syste

B. Course objectives related to equivalent credit department:

1. *Provides an understanding of the need for rules or control in our economic society and the importance of observing and respecting the law.*
2. *An awareness of the complexity of law and an understanding of when profession legal advice is needsd.*
3. *A laymans understanding of our legal system, historically and current, its strengths, weaknesses,.and what influence we have on the system.*
4. *Knowledge of legal terms and a basic understanding of common legal papers, their use and value.*
5. *A thorough understanding of contracts, what is required in a contract, the essential elements, the format, and your obligations and rights under contract*
6. *The role of law in our society, juvenile law, the court system, contracts, legal papers, insurance, sale of goods, bailments, consumer protection, and w:*

C. Texts and supplementary materials used: (list)

Text and Workbook; "Business Law, Principles and Practices" published by Houghton and Mifflin, Authors Goldman/Sigismond, Copyrighted 1982.

A guide to Washington State Courts.

D. Additional material or justification: (attach if necessary)

I have attached a course outline listing units in the text

I have also attached a course syllabus.

1. _____ **Department Recommendation**

2. _____ **Granting Department Recommendation**

3. _____ **Curriculum Committee Recommendation**

4. _____ **Principal Approval**

Subject: Business Law

Re: Course outline

The following subjects will be included in Business Law.

1. Understanding the Law
2. The American Legal System
3. Courts and Legal Systems
4. Crimes and The Criminal Justice System
5. Torts and the Civil Justice System
6. Rights and Responsibilities of Young People
7. Contracts
8. The Sales Contract
9. Title and Risk of Loss
10. Warrenties
11. Performance and Remedies
12. Consumer Protection
13. Bailments
14. The Employer-Employee Relationship
15. The Principal-Agent Relationship
16. Obligations to Third Parties
17. Commercial Paper
18. What Insurance is all About
19. Property and Casualty Insurance
20. Automobile Insurance
21. Personal Insurance
22. Social Insurance
23. Real and Personal Property
24. Wills and Estate Planning
25. Business Organizations
26. Government Regulation of Business

COURSE TITLE: Business Law

DEPARTMENT: Business and Office

COURSE DESCRIPTION:

Business Law is a one-semester elective course. Business Law emphasizes the application of legal principles and practices to personal management and financial problems. It develops understanding of our economic system and the place law has in it and allows the student to learn how to protect his own rights and at the same time observe the rights of others.

Criteria for enrollment:

1. Recommended for students of eleventh or twelfth grade level.
2. Recommended for students of average ability and above.

LEARNER OBJECTIVES:

Upon completion of Business Law, a student should demonstrate the following:

1. An understanding of the need for rules or control in our economic society and the importance of observing the law and respecting law enforcement officials.
2. An understanding of business law enforcement as it affects personal, family, and occupational pursuits.
3. An awareness of the complexity of law and an understanding of when professional legal advice is the best recourse for the protection of an individual's rights.
4. A layman's understanding of our legal system and its strengths and weaknesses.
5. Knowledge of law involving adults' and minors' contractual rights on the one hand and responsibilities and obligations on the other.
6. An improved ability to reason and solve problems through the study and analysis of legal cases.
7. Knowledge of such concepts as rights of private property and freedom of contract.
8. Knowledge of legal terms and a basic understanding of common legal papers, their use and their values.
9. Ability to use knowledge of business law for preventive purposes, thus avoiding unnecessary or damaging legal consequences.

MAJOR UNITS:

1. Introduction to the Legal System
2. Contracts
3. Purchase and Sale of Goods
4. Consumer Protection
5. Bailments
6. Agency and Employment
7. Commercial Paper
8. Insurance

9. Real and Personal Property
10. Wills and Estate Planning
11. Business Organization and Regulation

SKILLS:

1. Reading comprehension
2. Listening
3. Critical thinking
4. Large group discussion
5. Reasoning
6. Citizenship

APPENDIX D

To: Rom LaVerdiere
Curriculum Committee Chair

From: Karyl Monaco
English Department Chair

Date: June 1, 1987

Re: Business Communications

The English Department has met to consider the Business Department's request for Equivalent Credit Course Approval for Business Communications. We believe we cannot give our support for this request at this time for two primary reasons:

1. At the time Business Communications was given English credit, the English department was also allowing English credit for our own elective programs. Six years ago, when we moved from an elective to a core program, we decided that all students would be required to complete four full years of English. Our electives became "electives"--taken to enhance, not replace, the core program. Although we may be returning to an elective system in the future, until we do, we stand by the integrity of our current program.

2. The course Business Communications as now taught does not meet the same objectives as the second semester of senior English it is proposed to replace. Although we agree that the material covered is valuable and needed by many of the students, we also believe that what we offer during that last semester of English is an essential part of the four-year cycle. Business Communications meets few of the primary objectives established for our course.

As you know, the Language Arts programs K-12 are in the middle of the curriculum review process. It is likely that changes will be made in both the structure and content of our programs during the next two or three years. We will reconsider the Business Department's request at the appropriate time.

cc: Devlin
Emerson
Dell
Gear
Hansmann
Hilden
Nelson
Platt
Stewart
Taylor
Wick

APPENDIX E

MEMO

DATE: October 21, 1987

TO: Reuhl Kerch, Chairman
Curriculum Committee

FROM: The Science Faculty
Daniel Anderson, Steve Colgan, Douglas Mandt, Chairman, Louise Weston

RE: Cross-Credit request for the following vocational courses:
Horticulture
Agriculture I
Auto Mechanics

At the regular informal noon meeting of the science faculty we discussed the requests for science credit for the above named courses. The increase in science requirements for graduation and for college entrance, together with the recent changes in requirements for certification in academic areas suggest two important criteria be be met in order to grant science credit. The first is that a substantial portion of the course emphasize the concepts and principles of science as would be done in a traditional academic course. Second, that the instructor qualify for certification as a science instructor. It is not necessary for such certification to be held, but the academic background is sufficiently deep to meet the minimum training required by the state.

In summary the following responses were agreed to by consenses:

1) We endorse the granting of science credit for Horticulture. The academic background of the instructor would enable him to qualify for certification in this state as a Biological Science instructor. Review of the course indicates a strong emphasis on the teaching of scientific concepts and principles as would be expected in an academic course as well as the vocational aspects.

2) Agriculture I retain its status under a grandfathering clause. However, its status should be reviewed during the next year. To maintain the science credit option, the school policy should require that the instructor have an academic background in science such that certification

in science would be met (although not necessarily held), and that the course be designed to emphasize the concepts and principles of science as well as those of plant and animal husbandry. It is the course design that is of some concern at this time. It is suggested that the course be reviewed by the science faculty and the curriculum committee before a standing endorsement is granted.

3) We cannot support the request for the granting of science credit for Auto Mechanics. While there is a great deal of applied physics involved in the teaching of any mechanical course, this course does not deal with the concepts and principles of science in sufficient depth. Further, as we have indicated above, a course for science credit should be taught by an instructor who has a strong academic background in science, ie, qualify for state certification as a science instructor. While Auto Mechanics is beyond our purview, it does seem to be absurd to make this a requirement for a Auto Mechanics instructor.

The present course appears to be strong vocational offering and one that meets the needs for a number of our students. Rather than illegitamize it, and physics, it seems that if additional course offerings in science are needed it would be more appropriate to design and introduce either a new level of physical science, or a course jointly designed, and taught, by a vocational instructor and a science instructor dealing with the interface of science and technology. Puyallup High School and others are already experimenting with such joint offerings.

cc: Devlin
Lawrence

APPENDIX F

November 19, 1987

To: Ruehl Kerch, Curriculum Committee Chairman

From: Rich Elfers R. Elfers

Re: Cross credit of Economics and Business Law for senior social studies electives based on the May 1987 curriculum meeting.

The Social Studies Department has considered the Business Department's request and believes the above courses would complement the our offerings. Cross credit would be granted with the following limitations:

1. The student in his/her senior year must be actively pursuing a course of study in the business department.

2. Contemporary World must be taken. It cannot be waived.

cc Dick Devlin
ML Peterson
Roxanne Emerson
Dean King

APPENDIX G

To: Business Department (Ms. Emerson, Chair)
From: Mathematics Department (Mr. Blain, Chair)
Re: Request for Mathematics Cross-credits
January 29, 1988

The Mathematics Department has considered your request for cross-credit for four of your classes. After reviewing and discussing the course syllabi and texts, we make the following recommendations.

1) Business Machines and Business Math are primarily mathematics classes. They introduce new principles and applications and give students practice in a wide variety of problem solving situations. Therefore students who take Business Machines and Business Math should be allowed to count each of these courses towards their math requirements.

2) Accounting and Recordkeeping use basic mathematics. The primary focus of these two courses is financial terminology and concepts. Accounting (and to a lesser extent Recordkeeping) assumes basic math skills as a prerequisite. A student who has moved beyond general math to Algebra would not learn enough additional math to justify full math credit. Therefore, a student may count each of these courses as a math credit, on a case-by-case basis, only if the student has not satisfactorily completed a math course at the level of first year Algebra (C or better).

We hope these recommendations are acceptable. We certainly endorse the concept of students developing their math skills in an applications area, and we appreciate your interest in this matter.

cc: Curriculum Committee
Mr. Devlin, Principal